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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------------|-------------|----------------------|---------------------|------------------|
| 10/613,231 | 07/03/2003 | Albert I. Everaerts | 58851US002 | 4786 |
| 32692 | 7590 | 04/01/2005 | EXAMINER | |
| 3M INNOVATIVE PROPERTIES COMPANY | | | ZALUKAEVA, TATYANA | |
| PO BOX 33427 | | | ART UNIT | PAPER NUMBER |
| ST. PAUL, MN 55133-3427 | | | 1713 | |

DATE MAILED: 04/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/613,231

Applicant(s)

EVERAERTS ET AL.

Examiner

Tatyana Zalukaeva

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-73 is/are pending in the application.
- 4a) Of the above claim(s) 31-73 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-73 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>10/03, 10/04, 11/04</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION***Election/Restrictions***

1. Applicant's election with traverse of claims 1-3 and the species of alkyl methacrylate with at least 20 carbon atoms in the reply filed on 01/05/05 is acknowledged. The traversal is on the ground(s) that that even in the event that the heat-activatable adhesive was made by polymerizing monomers on the surface of a substrate, it would still involve steps of a) providing a mixture of monomers; and b) polymerizing the mixture monomers. This is not found persuasive because the polymerization on a substrate involves techniques different from those of conventional polymerization. With regard to Applicants' argument that different classification is not sufficient grounds for rejection, it is noted that different classification issue is brought as a supplemental grounds for restriction in addition to the above discussed grounds.

MPEP 816 (D): Provide reasons for insisting upon restriction

- (1) Separate status in the art
- (2) ***Different classification***
- (3) Same classification but recognition of divergent subject matter
- (4) Divergent fields of search, or
- (5) Search required for one group not required for the other.

Therefore, different classification is one of legitimate reasons for restriction.

Applicants argue that restricting Groups I, II and III would be a duplication of efforts on PTO's side in examining, if these groups are presented separately. This is not found persuasive because the consideration of undue burden is one that must be made by the

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Examiner, and Applicants' arguments that the search of one invention must necessarily result in a search of the other one has been considered, but is not persuasive insofar as the searches are not co-extensive and additional search would of necessity, be required for the combination of inventions. With regard to claims 58-73, Examiner apologizes for a typographical error that should read Group III , claims 40-73. It is believed that it "flows naturally" from the restriction presented in the previous communication, since claims 58-73 are also drawn to the article and all depend directly from claim 54, which IS included in group III for restriction.

The requirement is still deemed proper, and is therefore made final.

Claims 1-30 are examined on the merits. Claims 31-73 are withdrawn from consideration. Applicants are reminded that claims drawn to the process of making may be rejoined if the claims drawn to the product are found allowable.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Izzi et al (U.S. 2004/0011931).

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Izzi discloses heat activatable adhesive. Such adhesives have the characteristic that they are non-tacky until a certain activation temperature is reached. Once the activation temperature has been reached, the adhesive becomes tacky and bondable (0060).

An acrylic adhesive composition was prepared and evaluated for accelerated flow. An acrylic copolymer composition of 48 pbw 2-ethylhexyl acrylate, 50 pbw behenyl acrylate (available from Cognis, Ambler, Pa.), and 2 pbw acrylic acid was prepared by solution polymerization at 40% solids in ethylacetate to give a polymeric solution having a intrinsic viscosity of 0.8 dugram. (0153). This stands for 48% of lower alkyl acrylate and 50% of behenyl acrylate, which is a representative of the C-22 alkyl acrylate and is a specific specie named in the instant claim 6. With regard to the limitations of claim12, "less than about 1%" limitation reads on 0%, as well. With regard to claims 9 and 10 the rejection is made in the sense of In re Spada, 911 F.2d 705,709,15 USPQ2d 1655,1658 (Fed. Cir. 1990). Products of identical chemical composition cannot have mutually exclusive properties. A chemical composition and its properties are inseparable. Therefore if the prior art teaches the identical chemical structure, the properties and characteristics applicant discloses and/or claims are necessarily present.

With regard to claim 7, it is noted that term "about" permits some tolerance, and therefore, encompasses values on either side of the claimed value or number, In re Pappas, 214 F. 2d 172, 176-177, 102 USPQ 298, 301 (CCPA 1954); In re Vaney 185 F. 2d 679,683, 88 USPQ 97, 101 (CCPA 1950).

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7. Claims 1-5, 7-19, 21-30 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over by Everaerts et al (U.S. 5,648,425).

Everaerts discloses pressure sensitive adhesive comprising

- a) from about 10 to about 50 percent by weight of at least one higher alkyl acrylate having an alkyl group from 12 to 26 carbon atoms;
- b) from about 50 to about 90 percent by weight of at least one lower alkyl acrylate having an alkyl group from 4 to 12 atoms wherein said upper and lower alkyl acrylates cannot simultaneously have alkyl chains of 12 carbon atoms;
- c) at least one polar monomer copolymerizable with said higher and lower alkyl acrylate;
- d) sufficient crosslinker to impart enough cohesive strength to the adhesive in order to prevent substantial adhesive transfer (col.3, lines 50).

The polar monomer of the pressure-sensitive adhesive of the present invention can comprise either a strongly polar and/or a moderately polar monomer and can comprise up to about 5% by weight polar monomer if it is a strong polar monomer and up to about 30% by weight polar monomer if it is a moderately polar monomer. (col.3, lines 50-55).

Among polar monomers non-acidic polar monomers are named in col.4, lines 66, 67.

The amount of a crosslinker varies from 0.05-1% (col. 6, lines 63-65).

The instant preamble calls for heat-activatable adhesive, while Everaerts concentrates on pressure sensitive properties. However, it is the base presumption that the properties governing the claimed compositions, if not taught, may be very well met by

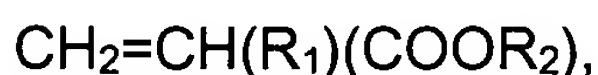
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the compositions of Everaerts, since the composition of Everaerts is essentially the same and made in essentially the same manner as applicants' composition, and therefore the properties that are not taught will naturally and inherently flow in the teaching of the prior art reference. The onus to show that this, in fact, is not the case is shifted to applicants as per In re Fitzgerald (205 USPQ 594). (CAFC) The above rejections were made in the sense of In re Fitzgerald or In re Spada, 911 F.2d 705, 709 15 USPQ 1655, 1658 (Fed. Cir. 1990), which settles that when the claimed compositions are not novel, they are not rendered patentable by recitation of properties, whether or not these properties are shown or suggested in prior art.

8. Claims, 7 and 20, are rejected under 35 U.S.C. 103(a) as being unpatentable over Everaerts in view of Husemann et al (US 2003/0113533).

Everaerts does not specify behenyl acrylate as a comonomer, however he generically teaches the monomers 12 to 26 carbon atoms, as discussed above, thus suggesting to those skilled in the art to employ any species from the disclosed genus.

Husemann discloses heat activatable adhesive having an activation temperature of at least +30°C (abstract), comprising a polymer that is composed of the following monomers: a1) from 70 to 100% by weight of acrylates and/or methacrylates and/or their free acids with the following formula



where R1 is H and/or CH3 and R2 is H and/or alkyl chains having from 1 to 30 carbon atoms; a2) up to 30% by weight of olefinically unsaturated monomers containing functional groups. Among monomers having 1-30 carbon atoms, Husemann names

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behenyl acrylate in (0024). Husemann also names along with behenyl acrylate those same monomers, as named by Everaerts, thus recognizing their equivalency for the purpose of being monomers for heat activatable adhesive compositions. In the instant case substitution of equivalents requires no express motivation, as long as the prior art recognizes equivalency, *In re Fount* 213 USPQ 532 (CCPA 1982); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *Graver Tank & Mfg. Co. Inc. V. Linde Air products Co.* 85 USPQ 328 (USSC 1950), and it would have been obvious to those skilled in the art to employ the behenyl acrylate of Husemann as one of the monomers of suggested genus of Everaerts with the reasonable expectation of success.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tatyana Zalukaeva whose telephone number is (571) 272-1115. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tatyana Zalukaeva
Primary Examiner
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A handwritten signature in black ink, appearing to read 'T. Zalukaeva', with a long, sweeping horizontal stroke extending to the right.

March 7, 2005